Description

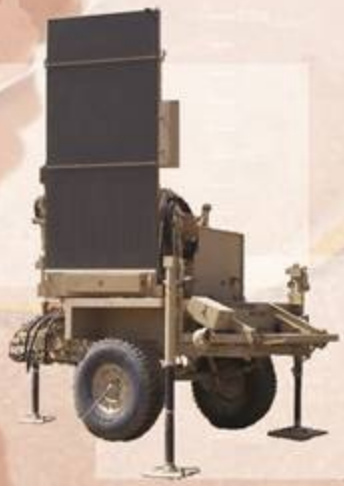
The AN/TPQ-36(V)8 is a medium-range battlefield surveillance radar that accurately, rapidly, and automatically locates a variety of enemy indirect fire weapon systems. It can handle simultaneous fire from weapons at multiple locations, detecting and reporting their positions on the first round. The AN/TPQ-36 system is compact, mobile, reliable, and maintainable. No longer must front-line troops and armor be exposed to long periods of enemy indirect fire attacks with the AN/TPQ-36 directing accurate counter-fire to neutralize enemy indirect fire positions.

PM Radars
SFAE-IEW&S-NV-R
Bldg.1201 East, 3rd Floor
Fort Monmouth, New Jersey 07703

Radar Processor

Operations Central (OC)

FIREFINDER RADAR AN/TPQ-36(V)8



Characteristics

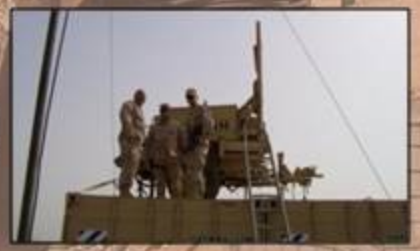
The AN/TPQ-36 is comprised of an antenna-transceiver trailer, a generator, and an operation control shelter that houses processing equipment, the weapon-locating unit, and communications equipment. The manned operation control shelter can be located as far as 50 meters away from the unmanned antenna trailer. The AN/TPQ-36's stationary antenna sweeps a rapid sequence of beams along the horizon, forming an electronic radar curtain over a 90° area. Any target penetrating the curtain triggers an immediate verification beam. On verification, an automatic tracking sequence begins. The AN/TPQ-36 can detect and report the positions of up to ten different weapons in seconds, at a maximum range of 24 kilometers. The system also corrects and improves the delivery of friendly fire. Signal and data processors test each track to filter out unwanted target returns, giving the AN/TPQ-36 an extremely low false-location rate and a very high probability of location. Once the signal and data processors establish a target's validity, the measured track data is smoothed, deriving a trajectory that it extrapolates to establish the target's firing and impact locations. Those locations are displayed on a map and printed out in map coordinates. From the operation control shelter, the power-driven antenna can be tilted or rotated to any azimuth position. The system offers a 360° sectoring mode, in which it will search one sector for a short period, then automatically rotate in turn to the other sectors.

Special Features

The AN/TPQ-36's automatic detection, tracking, and locating process is so fast that an enemy weapon's position can often be pinpointed before its projectile impacts. Locations of enemy weapon positions are corrected for altitude differences, using computer-stored digital maps, and presented to the operator in northing, easting, and altitude coordinates. Compact and highly mobile, the AN/TPQ-36 supports rapid deployment of forces and close combat. It can be positioned and ready for operation or readied for movement in minutes by a small crew. Because it can move quickly from one position to another, it is typically located close to the forward battle line in direct support of brigade operations remaining highly survivable because of it's mobility.

Capability/Improvements

With high system reliability and maintainability simplified by computer-controlled, built-in test equipment, the AN/TPQ-36 provides unusually high system availability. On-line fault detection and off-line fault diagnostics alert the operator to system faults, directing repair action to the unit that must be replaced. The AN/TPQ-36's effectiveness is enhanced by its 90°–360° sector, small crew, ease of operation, and high availability.



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